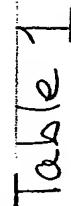


ABSTRACT OF THE DISCLOSURE

An extensible fluid permeable substrate having at least one direction of extensibility in an X-Y plane is provided with improved retraction to make the composite material suitable for disposable garment applications with minimal application of coalesced elastomeric materials. A pattern of untensioned coalesced elastomeric stripes is applied on an X-Y plane surface of the substrate in low add-on amounts of between about 20% to about 100% of the substrate basis weight to make the composite material. The longitudinal axes of the coalesced elastomeric stripes are oriented substantially along the direction of substrate extensibility and desired retraction of the composite material. By applying the minimal amount of elastomer necessary in an open pattern, the economical composite material also avoids negative by-products of elastic coatings or films such as bad hand, bad drape, loss of fluid transfer or intake ability and lack of breathability. In a particular embodiment the coalesced elastomers are applied as electrospun microfibers yielding a very low add-on rate with fluid permeable coalesced elastomer areas while providing improved retractive properties to the substrate.

[illegible]

Storm No.	Return period (yr)	Load @ 30 up Op 1	Load @ 30 up Op 1	Load @ 30 Dr Op 1	TEA (Bd) Op 1	TEA (Rd) Op 1	1/4 Year Loss Op 1	Load @ 30 up Op 2	Load @ 30 up Op 2	Load @ 30 Dr Op 2	TEA (Bd) Op 2	TEA (Rd) Op 2	1/4 Year Loss Op 2	Immed Str % Op 1	Immed Str % Op 2	Load Loss @ 50%
		g	g	g	kg/mm	kg/mm	%	g	g	g	kg/mm	kg/mm	%	%	%	g
6	1	262	864	-7	0.183	0.039	78.5	40	782	-11	0.09	0.037	59.2	34.324	35.629	218.854
	2	581	1077	-8	0.301	0.052	82.6	86	992	-16	0.132	0.053	60	32.762	34.328	216.312
	3	614	1161	-6	0.319	0.06	81.3	90	1088	-13	0.143	0.059	58.6	32.315	33.914	207.838
7	1	162	664	-10	0.129	0.027	79.2	25	611	-14	0.066	0.025	62	35.958	37.13	225.497
	2	336	861	-6	0.22	0.044	80.1	59	797	-10	0.102	0.042	59.3	33.075	34.616	211.205
	3	498	934	-3	0.262	0.05	80.8	76	859	-9	0.116	0.048	58.5	32.447	33.939	210.292
8	1	611	1107	-4	0.317	0.059	81.4	88	1025	-12	0.138	0.058	57.8	32.343	33.888	205.988
	2	549	1057	0	0.29	0.056	80.6	86	971	-6	0.132	0.055	58.1	31.77	33.37	217.485
	3	447	960	-6	0.248	0.05	79.7	61	886	-12	0.112	0.046	58.9	33.194	34.722	207.293
9	1	531	1037	-3	0.285	0.055	80.7	76	956	-8	0.126	0.053	58.2	32.363	33.964	214.699
	2	601	1113	2	0.311	0.062	80	101	1027	-6	0.144	0.062	57.1	31.253	33.019	204.361
	3	444	993	-7	0.239	0.043	82	61	836	-12	0.107	0.043	59.4	33.349	34.768	211.468
10	1	512	964	-1	0.27	0.051	80.9	83	873	-8	0.118	0.049	58.9	31.996	33.648	219.88
	2	483	1084	-4	0.278	0.059	78.9	70	1004	-9	0.131	0.056	57.2	32.586	34.158	214.45
	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 2

Mechanical Properties of Screen Printed Materials

	Elastomer add-on wt%	% Hyster Loss Cyc 1 %	% Reduction vs Control %	Immed Set % Cyc 1 %	% Reduction vs Control %	Immed Set % Cyc2 %	% Reduction vs Control %	Modulus of Elasticity psi	% Improve vs Control %
Control	0%	83%	N/A	35%	N/A	36%	N/A	21	N/A
Sample 1sp	35%	81%	2%	32%	10%	34%	6%	51	140%
Sample 2sp	40%	80%	3%	32%	11%	33%	7%		
Sample 3sp	60%	81%	3%	30%	16%	32%	11%	64	200%
Sample 4sp	65%	80%	4%	31%	14%	33%	9%	70	230%
Sample 5sp	100%	81%	2%	28%	20%	31%	14%	121	470%

Table 3

1 Mechanical Properties of E-Spin Materials

Table 4

	Elastomer add-on wt%	% Hysteresis Loss Cyc 1 %	% Reduction vs Control %	Immed Set % Cyc 1 %	% Reduction vs Control %	Immed Set % Cyc 2 %	% Reduction vs Control %	Modulus of Elasticity psi	% Improve vs Control %
Control	0%	83%	N/A	35%	N/A	36%	N/A	21	N/A
Samples	2.5%	81%	3%	32%	8%	34%	6%	31	40%
Samples	5%	80%	3%	34%	4%	35%	2%	39	80%
Samples	7.5%	81%	2%	32%	9%	34%	6%	43	100%
Samples	9%	80%	4%	32%	10%	34%	6%	-	-
Samples	10%	81%	2%	33%	6%	35%	4%	44	100%